

**SPECIAL MEETING
COMMITTEE ON LANDS AND BUILDINGS**

August 10, 2004

3:00 PM

Chairman Thibault called the meeting to order.

The Clerk called the roll.

Present: Aldermen Thibault, Roy, Osborne, Porter (late)

Absent: Alderman Gatsas

Messrs: Jen Drociak, Grace Levergood, Ron Johnson, Stephanie Lindloff,
Stephen Landry, Jim MacCartney

Chairman Thibault addressed Item 3 of the agenda:

Presentation by members of the Black Brook Advisory Committee on the proposed Black Brook restoration efforts and specifically the potential removal of the Maxwell Pond Dam.

Jen Drociak, Manchester Conservation Commission, stated thank you for meeting with us. With me today are members of the Black Brook Advisory Committee. We have Steve Landry from the Department of Environmental Services, Stephanie Lindloff also from the Department of Environmental Services, Jim MacCartney from TROUT Unlimited, Grace Levergood from the Department of Environmental Services, and Ron Johnson from the City's Parks & Recreation Department. I distributed a packet of handouts, which includes a letter of support from the Manchester Urban Ponds Restoration Program, a letter of support from the Manchester Conservation Commission, Dam Removal Cost Estimate, Dam Removal construction cost estimates, and maintenance and associated costs for dam removal. Today we'd like to talk to you about the potential for Maxwell Pond dam removal and some of the alternatives regarding repair or restoration. We're going to talk about the current status of the dam and the need for a decision, alternatives associated, cost estimates and funding sources, Blodget Park Improvements, dam removal and river restoration basics, and the Black Brook corridor restoration. And then if we have time we'd like to show you a short video on the communities and dam removal video. I'd like to read to you a letter of

support from the Manchester Urban Ponds Restoration Program. This is from Art Grindle and he is the Program Coordinator:

Honorable Committee Members:

The Manchester Urban Ponds Restoration Program (UPRP) was created in 2000 in an attempt to restore the city's urban ponds to their historic uses (such as boating, fishing, or swimming). The program attempts to promote public awareness, education and stewardship, reduce pollutant loading to improve water quality, maintain or enhance biological diversity, and provide improved recreational uses at each pond. One of the ponds in the program is Maxwell Pond.

Maxwell Pond has existed since 1900 when a dam was erected on Black Brook for the purpose of ice harvesting. Since that time the pond has been an ecosystem in need of restoration, since it has seen increased impacts from surrounding and upstream land uses over the last 50 years.

In 2001, I initiated an advisory committee comprised of environmental professionals to assess possible options for the restoration of the Maxwell Pond/Black Brook corridor. The initial discussions included dam removal as part of a larger Black Brook Corridor Restoration Project. There are many justifiable reasons for this option. First, the dam (currently in disrepair) no longer serves its original purpose, and is costly to maintain on a yearly basis. Second, the pond no longer resembles what it once was, and is no longer being used as a swimming area. Third, restoring Black Brook would enhance biological diversity and open up approximately 6 miles of unimpeded anadromous fish habitat from the Merrimack River upstream to Black Brook. This type of project, in the true spirit of restoration, certainly fits the scope and intent of the Manchester Urban Ponds Restoration Program.

Those on the advisory committee include representatives from the NH Department of Environmental Services, the NH Fish & Game Department, Trout Unlimited, the National Park Service, the Manchester Parks, Recreation & Cemetery Department, the Manchester Conservation Commission, and others. Each entity has been crucial in assisting the Urban Pond Restoration Program with the design of a feasibility study, pre-restoration monitoring, and the likelihood of success of dam removal and habitat restoration at this site.

Through many hours of fieldwork and meetings, we have completed an exhaustive study of the impounded area to better understand the impacts of dam removal at this site. Since this is a City owned dam, the City holds the final determination of whether to move forward with the restoration of Black Brook by removing the impoundment. Considering such factors as timing, funding, dam maintenance,

and habitat benefit, this is a rare opportunity for Manchester to restore at least some of what has been lost over the years.

In this period of rising environmental awareness, I ask that the Committee support this Urban Ponds Restoration Program initiative for the good of Manchester.

Thank you for your consideration, Respectfully submitted, Art Grindle, Urban Ponds Restoration Program Coordinator.

Ms. Drociak continued next we have Grace Levergood, who is going to speak about the current status of the Maxwell Pond Dam.

Chairman Thibault stated I want you to understand that the Committee is quite unaware as to what goes on over there, so if you would take your time to make sure that everybody here understands exactly what you're saying so that they can be better aware before they make a decision.

Ms. Drociak replied yes.

Grace Levergood stated there is a \$300 annual dam registration fee, which is assessed to the City. So during the last inspection I'll show you some of the things we are looking at. We continuously are looking at a seep that is on the...when we refer to a dam we refer to it as downstream left and right. On the right abutment on the bottom, there is a seep that's been there for many years. We are a little concerned with that. The upstream right face of the dam, I don't have any records of that being refaced, the left sign was refaced in 1986. So since that seep has developed, during our follow up inspection in 2003, we noticed there was a sink hole where the top arrow points. That sinkhole is about 3.5 feet deep and 1.5 feet wide. So we are a little concerned that something might be going on there. This is a close up of the sinkhole and it should be taken care of by the City and Ron has actually received an estimate from an engineering firm and they did some dye testing there to see whether that sinkhole is connected with the seep. You can see a close up of the seepage that I was talking about and also spalling of the concrete where that arrow is pointing. So those are not imminent dangers but they are a constant maintenance item for this dam that has to be looked at and also updating that emergency action plan is something that has to be thought and continuously kept up to date. Right now we have a letter that's out to the City for taking care of these repairs and so far we haven't received any notice that work has been done. In fact I was out there last week and since these photos nothing has been done, but the City has gotten together some estimates for repairs and I think Ron is going to talk to you about those next.

Chairman Thibault asked Ron, is there anything in the Parks & Rec budget to take care of some of these problems?

Ron Johnson, Parks, Recreation & Cemetery Deputy Director, answered we have identified. There was a request this year in our CIP budget. I think some of the reason that we've held back a little bit is the Black Brook Committee has been working for the past couple of years to identify different options and before we went forward one of the options might be looking at removal. So we wanted to wait until that went in force before we made a decision. But as Grace had indicated, they've submitted a letter of deficiency to the City. We've addressed some of the basic maintenance issues. We had a lot of debris that had built up behind the dam, that came down from the brook, but looking at the dam repair itself, this past November we had the engineering firm of Dubois and King come out and actually take a look at the dam. They did a study and they came up with a rough estimate of about \$60,000 to do the necessary repairs that have been identified in the DES's inspection report, mainly the seepage area and then the sinkhole and then there would be some restoration of the masonry walls. So that would be one option in order to get in and make the necessary repairs. In addition, we'd need to update the emergency action plan. The last one was done I believe in 1986. It cost us just under \$14,000 to prepare an emergency action plan, it is kind of a lengthy process to get that updated and right now we do need to make some minor modifications. So those are some costs. We had put together just kind of some annual what we would prorate over an annual maintenance need for this particular dam and it roughly costs the City about \$6,000 per year just to maintain this dam. That includes our staff going out doing the removal of branches and debris that build up behind the dam. As Grace indicated there's a \$300 annual inspection fee that the City has to pay to have the dam inspected. If you prorate out that \$14,000 or \$15,000 to have the emergency action plan, there's a cost of that on an annual basis and just annual repairs and improvements, not to the extent of the \$60,000, so it does cost the City about \$6,000 to make those repairs. One of the options I think that the DES folks would get a little more in to is dam removal. There is grant funding available from the State to allow this to happen. In our current CIP plan, the project was not approved but we did identify a total of \$250,000 for the park itself. The Maxwell Pond sits within Blodgett Park. We have a small playground there, basketball courts. The park really has not been rehabilitated in the last probably 25 or 30 years. The playground equipment is probably the oldest equipment that we have in the city. So we took an overall view of doing some rehab to the park. There's been an effort to start to restore the nature trails along the brook, so we included that in and then also some funds either for the removal or the repair of the dam. But unfortunately that was not approved in our CIP plan this year. So I think this group is here tonight just to present the different options and see which method the City wants to proceed, either if it's removal, which would negate a lot of these annual maintenance costs

or if they want to maintain the dam then the City's going to need to appropriate some funding to get the dam up to the State's needs.

Chairman Thibault asked Ron, would this also include removing some of the sediment that has been built up between the dam because of the work on the upper part of the Black Brook section?

Mr. Johnson answered I think the following speakers will get a little more into that. There has been a lot of sediment build up from the gravel and sand operations that are further upstream and I think both Stephanie and Steve Landry will speak a little bit more about how the pond had evolved over the last 20 years. It's roughly about 7.7 acres in size, but at one time it was around 8 feet in depth and today it's only about 4 feet in depth. So it's starting to silt up and the edges around the perimeter are starting to change, they're starting to get vegetated with some invasive plants and I think the folks for DES will talk a little bit more about that. I know Alderman Porter had contacted our office today with some questions, but it is about 7.7 acres, the pond itself, and it's only 4 feet deep. That compares to Dorrs Pond in Livingston Park is about 18 acres, the Pine Island Pond is about 25 acres, and our largest pond, and also Nutts Pond is about 16 acres. So it's probably one of the smaller ponds within the City parks systems of the seven that we have.

Alderman Osborne stated \$40,000 for demolition or removal? That's total cost?

Mr. Johnson answered right. A lot of this I think the next speakers will get a little more into this. But there is funding available through NH DES. They have a program to remove dams and so a lot of this would be provided through grant funding and then also in kind service from using some of the City forces.

Alderman Osborne asked how much is a lot of it?

Mr. Johnson answered I'll let them get into it. I think pretty much 100 percent of this would probably be covered.

Alderman Osborne stated okay well move on then. \$60,000 to rehab it, is that it, and then roughly \$20,000 a year to maintain it.

Mr. Johnson answered right. The \$60,000 is what we would need to bring it up to State standards today.

Alderman Osborne asked how long would that last?

Mr. Johnson answered we did the repairs in 1986, they are similar repairs that Grace eluded to, that cost us \$20,000 in 1986, so in 15 years it is something that needs to be done probably every five to ten years you need to take a look at it and make some of the repairs. It is a costly item for us.

Alderman Sysyn asked so it wouldn't run \$60,000 every five or ten years would it?

Mr. Johnson answered it's jumped \$40,000 in price from what we did 15 years ago, so I think it's going to escalate over time.

Alderman Osborne asked on top of the \$20,000 that you're doing every year for maintenance?

Mr. Johnson answered right. That's just to go out there, keep it inspected, remove the existing debris, but if we have to come in and so major concrete repair or repair some of the sinkholes, that's where the larger dollars come in.

Alderman Porter asked Ron, since 1986 of the top of your head, I know you can't be exact, but has money been spent annually to either upkeep it...? One of the concerns I have is that typically a lot of City buildings and so forth over the years we bring them up to par and then let them go again until they need to be repaired. How much has been spent since 1986 on this dam?

Mr. Johnson answered structurally we haven't spent really nothing on that. But what we've done for the annual maintenance are the crews going out there removing debris from the dam maybe repairing the fences, there are fences all the way around the dam, but actually doing masonry and structural repair nothing has been done since 1986.

Alderman Porter asked would it be safe to say that had something been done some of these items in the letter of deficiency wouldn't exist?

Mr. Johnson answered that's possible. I think preventative maintenance goes a long way.

Alderman Porter asked and what did you say for maintenance of that on an annual basis? Alderman Osborne said \$20,000, did I hear that correct.

Mr. Johnson answered right. \$20,000 that prorates out looking at our emergency action plan over the 15-year period, the dam inspections, and then just doing some of the general repairs that we do out there.

Chairman Thibault stated if the committee desires, why don't we hear the rest of these people and find out what they've got to say and then we can make a much better informed decision as to how we're going to handle this.

Stephen Landry, NHDES, Merrimack Watershed Supervisor, stated I think just to follow up on what Ron was talking about. Basically I don't want the committee to think this is a DES initiative. We're here because the Urban Pond Program approached us for some technical assistance and potential funding, so that's clear to the committee, we're not here to remove dams, we're here providing technical assistance and help the City make an informed decision. Basically I'm here to speak on behalf of my program which is the NHDES 319 Program, a Federal fund program designed at funding restoration projects throughout New Hampshire and specifically I manage projects in the Merrimack basin. Basically the Federal funds that I handle provide 60 percent of the total cost for any restoration project and for instance we heard Ron mention that dam removal estimate of \$40,000. Where would the 40 percent match come from? Your Manchester Urban Pond Restoration Program CEP Project has already allocated the 40 percent. So the cost incurred to the City of Manchester has pretty much been covered. Dam removal will be covered through a combination of Federal funds through my program at DES and the Manchester Urban Pond CEP monies, which I believe their project period ends in 2005 and they are looking for worthy restoration projects to allocate funding toward. We also have significant contribution from the Corporate Wetland Restoration Partnership and that is also in kind services along with other in kind services provided by Trout Unlimited and other volunteer sources. So in our minds this is a very cost effective project, an very inexpensive project and a very worthwhile project with very good measurable results that we would see, so we would be very much in favor of funding something of this nature. A lot of attention and a lot of questions have been raised about the potential for dredging. We had, I wouldn't say a public hearing, but we had a public meeting back in 2003 where we invited the public to come and hear various speakers speak about this proposed project and one of the cost estimates that has been currently put together for this pond to return this pond to a pretty good recreational, swimmable status would be the figure you see there, which is \$1,296,000, which is a pretty significant price tag that the funds that I manage probably couldn't even come close to approach funding. Our total annual budget for New Hampshire for my program is about \$300,000, so getting up into this range is pretty impractical for us right now, unless EPA wins the lottery. And you can see the cubic yardage of sediment that has accumulated and based on our sediment surveys that we did, there's about six feet of sediment accumulated behind the dam, which has reduced the maximum depth in the pond and this figure here obviously includes the cost of trucking and disposal of the soils. So dredging is definitely an option but a very costly one and one that would very tough for our limited restoration funds to take

care of. Now I'll introduce Stephanie Lindloff from our River Restoration Program at DES.

Stephanie Lindloff stated I'm going to take a little step back and give you some basic information about the concept of dam removal and river restoration because it is still a relatively new concept for a lot of people and the coordinator of the State's river restoration program for the Department for Environmental Services. It's a little over three-year-old program and I'm going to be giving you some information about dam removal and river restoration. We also have had some visual renderings, some simulations of what the site would look like if the dam were removed, so you could get an idea conceptually of what it would look like. Just to take a big step back and look at it as a big picture issue here, why are we talking about removing dams in the first place? There's literally thousands of dams across the country that are in need of repair, they've outlived their historic purposes and their useful and safe lives. Originally dams were built with very little if any regard for the impacts to the environment. They have been determined to cause environmental damage in various ways. I'm going to be getting into some of that. We've learned the importance that free flowing rivers have in the health of our ecosystems, and there's also been a growing public appreciation for the value of rivers. The picture there is the West Henniker dam removal project, which is happening as we're sitting here today. They are much further along at this point, that's on the Contoocook River, that picture was taken in the end of June and project will be completed by the end of August. So how many dams do we have in the State of New Hampshire? This is a good graphic to help you grasp the concept of the sheer number of dams. There's a national inventory of dams that the US Army Corp of Engineers maintains. That says that we have about 625 in New Hampshire, but there's a very specific definition that the dams are required to meet in order to make it on this inventory. In actuality we have over 3,000 dams in the State of New Hampshire that are currently regulated by the NHDES. These are dams that are inspected; they go through the inspection program and receive letters of deficiency just as Maxwell Pond dam has. And then when you include all of the other structures in the State that don't meet the regulatory definition of a "dam" in New Hampshire, we actually have close to 5,000 structures throughout New Hampshire that are barriers to fish passage, they may be causing water quality impacts, they may be public safety hazards, they may represent liability concerns for dam owners. So this just gives you a concept of the sheer magnitude of dams in New Hampshire. Dam removal is an issue that requires a multidisciplinary approach to determining whether or not it is the best decision for a particular site. There's economic issues, regulatory issues, engineering and ecological, but really at the center of all of these issues are the social concerns. Most dams that are in New Hampshire and most dams that are across the country are literally older than anybody in the community has been alive. So dams are considered to be permanent fixtures, they're a part of the

landscape and the idea or the concept of removing a structure that people have associated with for years, often lifetimes, can be a really difficult decision and can be controversial, it can raise a lot of concerns and these are some of the important things that need to be addressed during any decision making process about a potential dam removal. To give you an idea of how dams impact our river systems. The top graphic is a free flowing river similar to the situation above Maxwell Pond on Black Brook and the lower graphic is a water body with a dam on it. In this particular situation Maxwell Pond doesn't stratify behind the dam meaning the impoundment is not deep enough to provide for different layers of water temperature, but in this graphic it does show that. What we see in many impoundments across the state are that the waters behind dams warm up. They warm up more than a free flowing river would because they don't have as much opportunity to turn over, there isn't the ability to retain a high enough standard of dissolved oxygen to help out with the various ecosystem processes, the fish species are different behind a dam than they are in a free flowing river because the environment is greatly changed by the dam itself. Dams also as we see out at Maxwell Pond impound sediment. One of the most important functions that rivers serve are to transport sediment downstream and when you put a big hunk of concrete, a wall essentially, in the middle of a river, it stops the river from doing something that it naturally wants to do, which is to move sediment, to move nutrients, to move woody debris downstream. All of these things are natural with free flowing rivers and are critical components of healthy river, but with an impounded river system, you have the sediment falling out behind the dam and gradually filling in the impoundment as we're seeing out at Maxwell Pond. Associated with that are algae blooms, vegetation that grows on the impounded sediment, you can have debris jams. As Ron was discussing there's been debris that needed to be removed from upstream of the dam spillway because the dam is blocking debris from moving downstream. And of course dams block fish movement and Jim MacCartney from Trout Unlimited will be speaking a little bit more about the affects of this dam on the number of fish species that have been found downstream of the dam and upstream of the dam and the fact that if the dam were removed it would allow for more free fish passage throughout Black Brook. Some of the economic considerations that need to be taken into account. Ron already touched on, but just to reiterate, it's important to think about what it costs to both repair and maintain the dam over the long-term as well as what it costs to remove the dam. Having a dam is an ongoing responsibility. It's a long-term cost. Removing a dam is a one-time cost. There's a variety of economic benefits that the dam may provide, there's also a variety of economic benefits that a restored river may provide and the question is do the benefits outweigh the costs? Of course a key question for a lot of dam owners is, is there funding available to offset the costs of any of the options. This is one of the project sites that has been completed. Last year on the Bear Camp River in South Tamworth, this is a 20-foot high dam that was removed because it was a public safety hazard, the dam

owner was interested in eliminating their liability and it also reconnected 28 miles of free flowing river in the lakes region. The cost estimate for the dam removal, which was also conducted by the State, was \$120,000. The actual cost of removing the dam was \$75,000 and these are very common numbers that we see for dam removals across the State of New Hampshire, cost estimates are some times higher than what we anticipate because the dams are actually in poorer condition than we realized and so they are much easier to remove, and it tends to be the converse when you're talking about repairing dams. Often when you get into a dam and start doing repair work, additional deficiencies are identified and the cost estimates of doing the repair work tends to escalate. And you can also see that just eight months after the dam was removed the site is now a free flowing river. Some of the social issues as I had mentioned before are the most critical issues to related to any decision making process about dams. A lot of social concerns are based on a lack of information, the fact that dam removal is considered to be a somewhat radical new concept, people have some misconceptions about what rivers do, all the fish are going to die, or the river is going to dry up, there's a lot of different things that can be addressed through public outreach, which we've already had one public meeting and hopefully we've addressed a number of questions there and obviously we are happy to answer any questions that you may have today. But there's also a whole other slew of social issues that are value based and those are the things that are sometimes just impossible to reconcile because removing a dam is a fundamental change to what the site looks like. The key is to provide the public with enough opportunities to ask the questions and get answers to feel that they have as many of their concerns addressed as possible through the decision making process. And lastly, this is a project from Wisconsin. We're going to be showing about a eight or nine minute video at the end of the presentation today that talks about this particular case study, which is considered to be one of the biggest success stories for dam removal in the country. It was a case study shown in a documentary. The Woolen Mills Dam in West Bend, Wisconsin. It was a city owned dam, needed considerable repair, repair estimates were actually in the \$3 million range, and the dam formed a 60-acre impoundment in the middle of the community. So there was a lot of concerns about what this area would look like after the dam was removed because it was smack dab in the middle of this town. The community was engaged in a decision making process of whether or not to remove the dam and when it was decided that it was most economically prudent to remove the dam, the community residents were involved in a visioning process for figuring out what to do with the exposed land because it was essentially about 55 acres of "new land" that they had to decide what to do with. So they chose to turn it into half of a formal park and half of a restored area that has native species, grasslands, you can see that there's canoe landings, places to fish from. This particular site was large enough that they had the ability to bring in footbridges and this has now become a huge asset to the community of West Bend. The cost of removing the

dam was \$170,000 as opposed to \$3 million to repair the dam and the fact that the community was engaged in a visioning process for determining how to restore this area leveraged a whole slew of additional funding to pay for considerable part improvements and that's going to be discussed more in the video that we'll be watching in just a few minutes. Some of the issues to consider that we already talked about: the dam no longer provides us historical purposes, which was for ice harvesting. This does represent an opportunity to restore, to reconnect six miles of Black Brook and Jim MacCartney is going to be talking more about that. As Ron had said and Jen alluded to the timing is definitely right here, the City is dealing with a decision of whether to expend funds on repairs, there's also a lot of funding available to pay for restoration, so the stars have kind of aligned in terms of the time to make a decision regarding the future of this project site. And there's a lot of interested parties that have been engaged in this process for the last couple of years. These are the photo renderings that have been done. This one was done by Jim MacCartney, before and after you can see that there's a lot of natural bedrock at the site, which will certainly be retained, so there will still be a sense of rapids and riffles at the project area. This is another rendering that was completed looking upstream from the dam. This was done by VHB as an in kind service, the consulting firm VHB. Here is another photo rendering of the impoundment that Jim MacCartney has provided that shows the more meandering brook that would be reestablished if the dam were removed. The exposed lands that would be exposed after the dam were removed would revegetate very quickly and there's a lot of ideas out there on how to go about revegetating the area. And I'm going to pass it along to Jim MacCartney from Trout Unlimited next.

Alderman Porter stated you mentioned six miles of the brook. Where does it start and from the dam where does it go? Into the Merrimack?

Ms. Lindloff answered yes.

Alderman Porter asked do you have a map, does anybody have a map showing...?

Ms. Lindloff stated I think that Jim will be touching on that in the next part so if you would mind holding off until the next slide that would be great.

Jim MacCartney, Trout Unlimited, stated you all had heard some of the financial and social considerations associated with possible dam removal. My organization, Trout Unlimited, is a national non-profit organization. The mission of the organization is restoration and protection of cold water fisheries. Primarily salmon and trout. I'm going to spend a couple of minutes just talking with you about some of the ecological considerations, Stephanie has already touched on a few of those. One of the things that we tend to look at in terms of ecological restoration is particularly for river resources, is looking at an entire watershed. So

basically the land area that drains to whatever river resource we may have in mind. In this case this is a map of the Black Brook watershed, the headwaters of Black Brook are in Dunbarton and Goffstown and also parts of Hooksett, and then draining down into Manchester. Only a few hundred feet downstream from the dam into the Merrimack River. Removal of the dam will help to restore six miles of upstream habitat. In the previous map, it is a little difficult to tell with that scale, but much of the upstream land area within the watershed is in forested use. There is some agricultural use. As we get into Goffstown and Manchester it is a much more urban environment, there's a lot more development. That said, there's also some significant conservation land, which is shown in green on this map. When we're considering ecological restoration of the watershed, the critical areas were not so much in the upstream portion of the watershed as in the lower portion of the watershed and particularly what I've identified here as the Black Brook corridor, just the last few miles downstream. One of the significant impacts is the dam at Maxwell Pond. It has converted what would otherwise be river rain habitat into an impounded pond habitat. Also upstream is Aggregate Industries, you are probably familiar with sand and gravel operations and concrete processing. And then there are a few other impacts and I'll get to those in just a minute. The reason why this is significant is that Black Brook has been stocked by Fish & Game with trout to provide recreational fishing opportunities, it is also stocked by NH Fish & Game and the US Fish & Wildlife Service with juvenile Atlantic salmon as part of the larger effort to restore Atlantic salmon in the Merrimack river watershed. And there is an index site here where Fish & Game goes out every year and identifies how successful the juvenile fish are. There's only a few locations in the Merrimack River watershed that provide suitable habitat and Black Brook happens to be one of them. As I mentioned, there are some other upstream impacts on the Brook. These are a few shots of Aggregate Industries. In the top photo that's a bridge that's comprised of a couple of concrete culverts. You can see in the shot on the lower left where there's been some erosion when the stream overtopped and then in the lower right, you can see where there's also some fine material that's being contributed to Black Brook associated with some of the gravel washing activities that are there. As you heard previously, some of those sediments have made their way downstream into Maxwell Pond. One of the other impacts that we identified upstream is at the location of the transfer station. There's a historic ford there at that location where vehicles were crossing the stream. You can see in the top photo where I believe it is one of the City trucks was crossing the stream at that location. One of the things that we did is we compiled some baseline data about what the system looked like and we were looking at several different things. We were looking at what the channel morphology is, which is basically the shape of the stream. We were looking at the femmity in the pond, so we we're trying to identify what the bottom of the pond looked like. We're really looking at two elements there. One was what the depth of sediment was. We wanted to get some idea of what had come down from upstream what kind of material might need to

be dredged in order to restore it to historic conditions. That's what's happening there in the shots on the right, probing through the ice. We also did some monitoring of some of the organisms that live there, including monitoring of fish as well as mackerel and the aquatic insects that are in the stream. We found a greater diversity of both downstream of the dam, which is to be expected. One of the significant impacts of the dam in terms of ecology is it block fish passage up and downstream, more so in an upstream direction, which is significant for anadromous and catadromous fish species, which are those that migrate from fresh water to salt water and vice versa. Like the American eel, which is shown in the lower left. So that sort of sums up some of the ecological issues that are out there. Certainly from Trout Unlimited's perspective, removal of the dam would be a beneficial change for Black Brook, but there are other considerations to look at here. In terms of the steps that have been taken. There was a public informational meeting that was held in 2003 as you've already heard. Thirty or forty people attended that. We're here today talking with the Lands & Buildings Committee and then the next step that we see is a recommendation from you to the Board of Mayor and Aldermen. With that I think we'll go ahead and cue up the video.

Alderman Porter asked of those 34 people, were there people that spoke in favor of keeping it? I think we have a couple of issues. One is the financial issue, which is always present. The others are the social issues and the social impact on people that would like to keep it like it was. What was the split in terms of keeping it and not keeping?

Mr. MacCartney answered I not sure I could identify the split. I would say it was probably give or take 50/50 percent. There were certainly a number of folks there that supported removal of the dam and saw a number of the benefits associated with that, financial, ecological and even social. It's also true that there were some folks there that were fairly adamant of maintaining the dam. I think it's fair to characterize the sentiment of most of those people as being interested in the social considerations.

Alderman Porter asked would you entertain if anyone after the video would like to speak to retain it or remove it?

Chairman Thibault answered yes.

Alderman Osborne asked does the EPA play a role in this at all?

Mr. MacCartney answered not directly apart from the funding that Steve Landry mentioned earlier. The 319 Program, the funding there, that is Section 319 of the Clean Water Act and those are EPA funds under the Clean Water Act that are passed through the Department of Environmental Services for projects.

Alderman Osborne asked has anything ever gone wrong by removing a dam?

Mr. MacCartney stated I'll let Stephanie address that.

Ms. Lindloff answered things have gone wrong. The Hudson River is an excellent example. The clean up of PCBs on the Hudson River is partially attributed to a very poorly planned dam removal in the 1970s that released contaminated sediments. So a key factor with any dam removal is appropriate scoping of the project, making sure that you're looking at all of the potential issues that need to be addressed, chances are higher that things are going to go wrong if it's a fly-by-night operation and this clearly isn't that.

Alderman Osborne asked this project has been looked at?

Ms. Lindloff answered yes. This is a relatively straightforward project and we're following the standard protocol for any dam removals in the State. There are regulatory guidelines for dam removals and this is following that.

Alderman Osborne asked why was that particular dam put there in the first place?

Ms. Lindloff answered this dam was put here to assist with ice harvesting. The Black Brook was of such a high quality that they chose to dam it so that they could provide for an impoundment that would create ice because it was high quality water. So the ice that it would be able to create was considered to be of good quality. 1900 I believe is the date of the dam being built and I think that it no longer functioned as of the 1940s, it was taken out of operation.

Alderman Lopez stated just one thing fast and you don't have to answer it right now but maybe some point before the committee makes their decision. Throughout all the dams in the State of New Hampshire, does the Army Corps of Engineers rebuild them, or does the National Guard can they assist on rebuilding dams? Have they done that in the past?

Ms. Lindloff replied that's a good question. The only dams that the Army Corps of Engineers would contribute to rebuilding, are dams that they maintain and regulate. Mainly the big flood control projects. Unfortunately it's an issue that many dam owners are dealing with because there are so many dams out there, there is really no excellent funding mechanism for assisting with the cost of dam repair. There are a lot of funds out there to assist with dam removal because it's an ecosystem restoration benefit, but the sheer numbers of dams and their age and their various states of deterioration, there just has not been a good funding mechanism developed to help repair dams.

Alderman Forest stated I want to correct you a little bit because I know in the early 1960s the ice plant was still operating. And the other thing is, I know I'm a little late for this meeting, but there was a public hearing in my ward and there was about 80 or 90 constituents that were there. I know the State along with Parks & Rec along with Ron Johnson have done a lot of work in studying both Black Brook and the dam. There was some talk about the repairs that need to be done, which the City can not afford to do and the dam has to be maintained. As an Aldermen, mainly listening to my constituents along Dunbarton Road that are opposed to this project, I am also opposed to this project.

Chairman Thibault asked to keeping it our taking it out?

Alderman Forest answered opposed to removing it. My constituents want it kept the way it is but I know there's a catch 22 to this, that if we keep it it's quite expensive to maintain and if we tear it down then the State will pay the project, so that's my comment on this.

Alderman Osborne stated this is the last question I had and maybe Alderman Forest can answer it for me. Why do they want to keep it? What would be the reason?

Alderman Forest answered I think mainly because of the aesthetics of the thing. It's becoming a wetlands, there's a lot of animals that are there now that were not there before, the neighbors and the constituents are used to seeing it the way it is and again, they are opposed to it and as their representative to the area, so am i.

Chairman Thibault stated we have about 10 minutes to look at your presentation so we'll go along with that and then if there are any other questions, we will entertain those.

Ms. Lindloff stated I was going to offer that if there are more questions, that we would be happy to postpone the video, we could leave a copy of the video here, you could review it...

Chairman Thibault asked how long is the video?

Ms. Lindloff answered it's about eight or nine minutes long.

Chairman Thibault stated we have time for that but not much more than that and then we'd probably have a few questions and that will be it.

Ms. Lindloff stated one thing that I did want to just follow up on something that the Alderman said regarding the public feedback at the public information meeting. It seems that there was a consistent concern about the fact that people would like to see it restored to a swimming area and I know that you're able to just join us so we did develop the dredging estimates for what it would cost to restore it to that recreational purpose, which was certainly one of the aesthetic and recreational use issues that was mentioned several times at the public meeting.

Alderman Forest stated and to answer that, I know I've talked Ron [Johnson] and I've also talked to Jen a couple of times about it, so she's aware of my position and the rest is up to this committee.

The video "Take A Second Look: Communities and Dam Removal" was presented to the committee.

Alderman Roy stated I'll let anyone on the committee answer, whoever feels best suited most I think would be DES and possibly Trout Unlimited. First I'd like to make a very direct statement to our Parks & Recreation, Ron you're the face here so you're going to get the brunt of it. I have a very bad problem as a new Aldermen looking at safety issues and sinkholes and lack of maintenance. I know that it starts with the Aldermanic Board and trickles down through our department heads to our employees, but I'd like to be kept aware of any other safety issues like sink holes on the outside of fencing for kids who want to look down into the stream, look down and could possibly be in a dangerous situation. So please make us aware of those especially during budget time. Getting to the questions, to DES, the contamination, you're absolutely certain when this dam comes down we're not going to impact the Merrimack River?

Ms. Lindloff replied we still need to do the sediment samples and test them for contaminants. We've already done probing and there's a lot of sand and gravel built up and if we went with the dam removal alternative we would definitely look at the sediment samples.

Mr. Landry stated the Urban Ponds Restoration Program has done some sediment testing for all ponds in Manchester and Maxwell is of course one of them and the initial screening results we've looked at and had other DES folks look at and it's very innocuous materials in there given the watershed. We'd probably do a more extensive testing, which would be incorporated into any budget that we would put a project together for with the DES funding.

Alderman Roy asked and this would be to probably Trout Unlimited. Once removal of the dam, the impact from the lower side of the dam to the upper, you feel that all species will, food chain uninterrupted, it would be a good project for fishing, wildlife?

Mr. MacCartney answered yes. There will be two significant changes. One is unimpeded upstream and downstream passage. The second is, restoration of riverine habitat from what is currently an impounded situation and not a really productive impounded situation in terms of species that typically inhabit that kind area.

Alderman Roy asked during the renderings I noticed that they kept the embankments the drop offs and the chain link and this is more of a statement than a question. We didn't see any chain link in Wisconsin. We saw beautiful footbridges and grass and pictures of weddings taking place with beautiful backdrops. One thing that I would like to see and I'm sure if this goes forward the Alderman from that ward would like to see is a picturesque park setting. If we could factor that into the budget, which is my next comment. You have a \$38,000 projected cost; I noticed on one of your sections under equipment costs you have \$40.00 a day for a 10-wheel dump truck. I have a feeling it would be \$40.00 an hour. I would be very cautious when we go forward. I do appreciate that there is funding available to this so that we can do this project without a taxpayer input or taxpayer burden, but I would like to ask for input. There are gentlemen that have been sitting through this today and if the Chair so pleases I would like to ask if we have any public input from anyone in the audience.

Chairman Thibault asked are there any other questions from the Aldermen?

Alderman Forest stated I just have a comment to Alderman Roy. I know that this has been a process with everybody that's here from the State and the City and Parks & Rec and all of that. A lot of these questions were answered 18 – 20 months about the fish and the wildlife, I know Trout Unlimited and the DES have done a lot tests up and down Black Brook. I think they surprised a lot of us with some of the fish that were still in there, which I thought were long gone. So it has been a lot of the concerns that Alderman Roy has asked and I know they've answered it and I think it's mainly coming up to this board and again the input from the constituents.

Alderman Porter stated it is late and unfortunately we won't be having any more speakers. I think there's a lot of information to absorb in one session and I can understand a little bit on both sides, but I don't really know enough to make a vote.

On motion of Alderman Porter, duly seconded by Alderman Osborne, it was moved to table this item until the next meeting. The motion carried with Alderman Roy duly recorded in opposition.

Chairman Thibault stated we will have to set up another meeting where we can in fact hear some of the other representatives that are here that want to say a few things before this committee makes its recommendation. So I'll ask the Clerk to set up another meeting and let you people know as to when we're going to do this and then we'll go from there.

There being no further business to come before the committee, on motion of Alderman Roy, duly seconded by Alderman Porter, it was voted to adjourn.

A True Record. Attest.

Clerk of Committee